



# AIRWORTHINESS DIRECTIVE

*This Airworthiness Directive (AD) is issued pursuant to Canadian Aviation Regulation (CAR) 521.427. No person shall conduct a take-off or permit a take-off to be conducted in an aircraft that is in their legal custody and control, unless the requirements of CAR 605.84 pertaining to ADs are met. Standard 625 - Aircraft Equipment and Maintenance Standards Appendix H provides information concerning alternative means of compliance (AMOC) with ADs.*

**Number:**

CF-2021-17R1

**Effective Date:**

2 August 2021

**ATA:**

35

**Type Certificate:**

A-177

**Subject:**

Oxygen – Supply System Flexible Oxygen Hose – Inspection and Replacement

**Revision:**

Supersedes AD CF-2021-17, issued 28 April 2021.

**Applicability:**

Bombardier Inc. model BD-700-1A10 and BD-700-1A11 aeroplanes, serial numbers 9002 through 9879, and 9998.

**Compliance:**

As indicated below, unless already accomplished.

**Background:**

Oxygen leaks have been found during scheduled maintenance tests of the aircraft oxygen system. Further investigation of the leaks found oxygen hoses that were cracked, brittle or broken. This condition was found to exist on multiple aircraft. The oxygen hose material has been found to deteriorate over time and the condition is limited to hoses fabricated by O2 Corporation, identifiable by a specific series of part numbers. A leak in the oxygen line may result in failure to provide oxygen to passengers and crew as well as resulting in an oxygen enriched atmosphere creating a fire risk.

Bombardier Inc. has issued service bulletins (SBs) to inspect installed oxygen hoses, and to remove and replace the affected hose series with new specified hose series. Depending on the age and location of the hoses, repetitive testing is required until removal and replacement with specified hoses is accomplished.

AD CF-2021-17 was issued to address this condition on certain aeroplanes. However, this condition may exist on other aircraft that have hoses made from age-sensitive elastomer materials. The Federal Aviation Administration issued Special Airworthiness Information Bulletin (SAIB) NM-13-34, dated 23 May 2013, and Transport Canada will issue a Civil Aviation Safety Alert (CASA) to communicate information regarding this condition.

This AD revision, CF-2021-17R1, is issued to clarify the compliance time for the removal and replacement of O2C20T1 hoses.

**Corrective Actions:**

**Part I – Inspection, Testing and Replacement**

- A. Within 6 months from the effective date of AD CF-2021-17, 12 May 2021, complete the inspection of the hose assembly installations in accordance with the Accomplishment Instructions of the applicable SB, Revision 1, dated 12 February 2021, as identified in Table 1 of this AD, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

- B. If O2C20T1 series of hoses are found, replacement of the hoses is required. Remove and replace the O2C20T1 series hoses in accordance with the Accomplishment Instructions of the applicable SB. Perform interim oxygen system testing for hoses that are not immediately replaced, as specified in the applicable SB. Compliance times are indicated in Table 1 of this AD.

**Table 1: SB References and Requirements**

<b>Aeroplane Model and Bombardier SB</b>	<b>Oxygen hoses subject to part inspection, no later than 6 months from the effective date of AD CF-2021-17, 12 May 2021</b>	<b>O2C20T1 hoses to be replaced, no later than 6 months from the effective date of AD CF-2021-17, 12 May 2021</b>	<b>O2C20T1 hoses to be replaced if failed pressure or leak test, but no later than 10 years from Aircraft Completion Supplemental Type Certificate (STC) issuance</b>	<b>Repetitive testing requirements for O2C20T1 hoses until replacement</b>
BD-700-1A10 700-35-015	All oxygen hoses, as identified in the applicable SB	All O2C20T1 hoses	N/A	N/A
BD-700-1A10 700-35-6005	All oxygen hoses, as identified in the applicable SB	All O2C20T1 hoses from the flight compartment and third crew (left hand side (LHS) enclosure)	All other O2C20T1 hoses	As specified in SB depending on elapsed time from Aircraft Completion STC
BD-700-1A10 700-35-6501	All oxygen hoses, as identified in the applicable SB	N/A	All O2C20T1 hoses	As specified in SB depending on elapsed time from Aircraft Completion STC
BD-700-1A11 700-1A11-35-014	All oxygen hoses, as identified in the applicable SB	All O2C20T1 hoses	N/A	N/A
BD-700-1A11 700-35-5005	All oxygen hoses, as identified in the applicable SB	All O2C20T1 hoses from the flight compartment and third crew (LHS enclosure)	All other O2C20T1 hoses	As specified in SB depending on elapsed time from Aircraft Completion STC

- C. This paragraph gives credit for completion of inspection, repetitive testing, removal, replacement, and necessary testing after replacement of O2C20T1 series of hoses before the effective date of this AD, which was in accordance with the Accomplishment Instructions of the applicable SB, Basic Issue, dated 28 September 2020, listed in Table 1 of this AD.

## **Part II – Installation Prohibition of Affected Parts**

From the effective date of AD CF-2021-17, 12 May 2021, O2C20T1 series of hoses are not eligible for installation as a replacement part on model BD-700-1A10 and BD-700-1A11 aeroplanes.

**Authorization:**

For the Minister of Transport,

*ORIGINAL SIGNED BY*

Craig McAllister  
Acting Chief, Continuing Airworthiness  
Issued on 19 July 2021

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